

IN THE CLAIMS

1. (Currently Amended) A spinal prosthesis, comprising:

a first prosthesis body sized, shaped, and oriented to span the distance between a first pedicle of a vertebral body and a first inferior articular process on the opposite side of the vertebral body from the first pedicle;

a second prosthesis body sized, shaped, and oriented to span the distance between a second pedicle of the vertebral body and second inferior articular process on the opposite side of the vertebral body from the second pedicle;

a fastening element couple to each of the first and second prosthesis bodies, the fastening elements configured to be installed within the vertebral body at or near the first and second pedicles; and

an artificial facet joint structure carried by each of the first and second prosthesis bodies at locations spaced from the fastening elements

wherein the artificial facet joint comprises a first and second set of cups, the first set of cups being configured to articulate with a left and right inferior halves of the facet joint and the second set of cups being configured to articulate with a left and right superior halves of the facet joint.

~~wherein the artificial facet joint is configured to articulate.~~

2. (Cancelled)

3. (Cancelled)

4. (Previously Presented) A prosthesis according to claim 1 wherein each prosthesis body includes a bearing structure positioned on an opposite side of each prosthesis body from the fastening elements.

5. (Previously Presented) A prosthesis according to claim 1 wherein the artificial facet joint structures are sized, shaped, and oriented to articulate with a second spinal prosthesis mounted on an adjoining vertebral body.

6. (Cancelled)

7. (Previously Presented) A prosthesis according to claim 1 wherein the artificial facet joint structures are sized, shaped, and oriented to articulate with a second spinal prosthesis mounted on an adjoining vertebral body.

8. (Previously Presented) A prosthesis according to claim 1 wherein the artificial facet joint structures are fixed to the prosthesis bodies.

9. (Previously Presented) A prosthesis according to claim 1 wherein the artificial facet joint structures are fixed to the prosthesis bodies by adhesive or cement.

10. (Previously Presented) A prosthesis according to claim 1 wherein the artificial facet joint structures are fixed to the prosthesis bodies by mechanical attachment.

11. (Previously Presented) A prosthesis according to claim 1 wherein the artificial facet joint structures are removably carried by the prosthesis bodies.

12. (Previously Presented) A prosthesis according to claim 1 wherein the artificial facet joint structures are removably attached to the prosthesis bodies by frictional engagement.

13. (Previously Presented) A prosthesis according to claim 1 wherein the artificial facet joint structures are removably attached to the prosthesis bodies by a Morse taper.

14. (Previously Presented) A prosthesis according to claim 1 wherein the artificial facet joint structures comprise an insert fitted to the prosthesis bodies.

15. (Previously Presented) A prosthesis according to claim 1 wherein the artificial facet joint structures comprise an insert fitted by frictional engagement to the prosthesis bodies.

16. (Previously Presented) A prosthesis according to claim 1 wherein the artificial facet joint structures comprise an insert fitted by a Morse taper to the prosthesis bodies.

17. (Previously Presented) A prosthesis according to claim 1 wherein the artificial

facet joint structures comprise a removable insert fitted to the prosthesis bodies.

18. (Previously Presented) A prosthesis according to claim 1 wherein the artificial facet joint structures pivot with respect to the prosthesis bodies.

19. (Cancelled)

20. (Previously Presented) A prosthesis according to claim 1 wherein the prosthesis is made from a material selected from a group consisting of polyethylene, rubber, tantalum, titanium, chrome cobalt, surgical steel, bony in-growth material, ceramic, artificial bone, or a combination thereof.

21. (Cancelled)

22. (Previously Presented) A prosthesis according to claim 1 wherein each prosthesis body includes a bony in-growth material.

23. (Cancelled)

24. (Previously Presented) A prosthesis according to claim 1 wherein each fastening element includes a bony in-growth material.

25. (Withdrawn) A method of replacing, on a vertebral body, all or a portion of a

natural facet joint using the prosthesis defined in claim 1 to provide improved support for the spinal column, the method comprising the steps of (i) removing all or a portion of a natural articular process from the vertebral body, and (ii) fixing the prosthesis as defined in claim 1 to the vertebral body to replace the removed portion of the natural articular process with the artificial facet joint structure.

26. (Withdrawn) A method according to claim 25 further including a step of removing at least some of the lamina from the vertebral body.

27. (Withdrawn) A method according to claim 25 further including a step of removing at least part of a pedicle from the vertebral body.